May 3, 1955 E. B. GREEN 2,707,615

TWO-WAY TIMBER JACK

Filed March 25, 1954

Fig. 2.

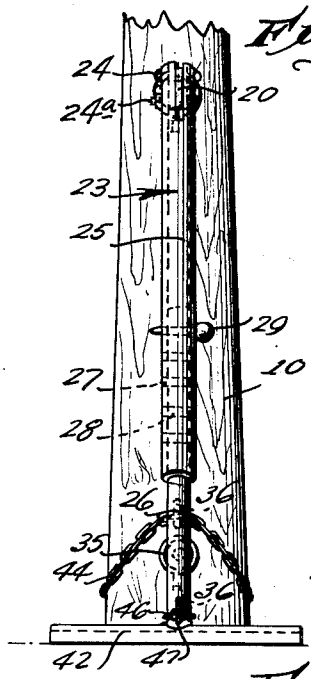


Fig. 1.

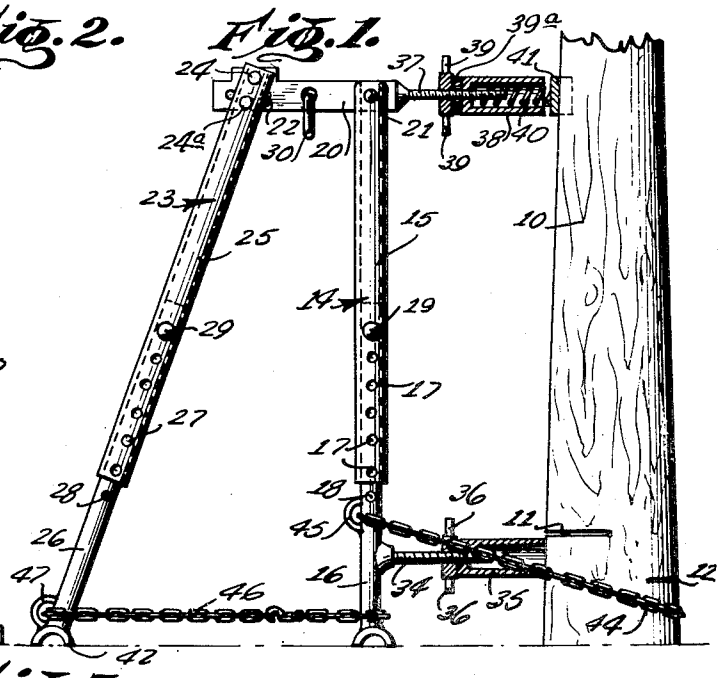
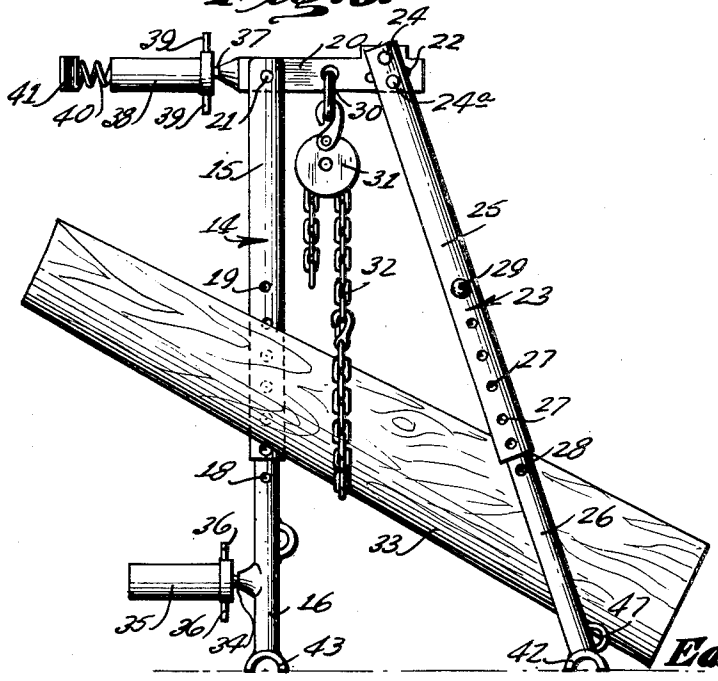


Fig. 3.



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United States Patent Office 2,707,615 Patented May 3, 1955

2,707,615

TWO-WAY TIMBER JACK

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Application March 25, 1954, Serial No. 418,629

1 Claim. (Cl. 254—100)

This invention relates to a timber jack for use in felling and handling trees, logs and the like.

The object of the invention is to provide a timber jack which will enable trees to be felled and handled with great ease and safety.

Another object of the invention is to provide a timber jack which can be adjusted and wherein damage to saws and the like will be prevented and there will also be effected a saving in time in felling trees.

A further object of the invention is to provide a timber jack which is extremely simple and inexpensive to manufacture.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this application, and in which like numerals are used to designate like parts throughout the same:

Figure 1 is a side elevational view, with parts broken away and in section, showing the timber jack of the present invention being used for felling a tree.

Figure 2 is an end elevational view of the assembly of Figure 1.

Figure 3 is a side elevational view of the timber jack showing a modification wherein a log is being hoisted.

Referring in detail to the drawings, the numeral **10** designates a tree to be felled, Figures 1 and 2, and before the tree **10** is felled it is provided with a pair of oppositely positioned cuts **11** and **12**. The cuts **11** and **12** can be made in any suitable manner, as for example by a saw.

The present invention is directed to a timber jack which is adapted to be used for felling the tree **10** while the cut **11** is being made therein. The timber jack includes a vertically disposed standard **14** which comprises a hollow tube **15** having an open lower end, and telescopically or slidably mounted in the tube **15** is a leg **16**. The tube **15** is provided with a plurality of spaced openings **17** which are adapted to register with openings **18** in the leg **16**. A suitable pin **19** is adapted to be extended through the registering openings **17** and **18** in order to maintain the standard **14** immobile in its various adjusted positions.

A pin **21** pivotally connects an end of a bar **20** to the upper end of the tube **15**, and the bar **20** is provided with a plurality of spaced openings **22**. A brace **23** includes a hollow casing **25** and a rod **26** telescopically mounted therein. The upper end of the casing **25** is pivotally connected to the bar **20** by means of a bolt **24** to permit the brace **23** to be adjusted angularly with relation to the standard **14**. The openings **22** are arranged in the arc of a circle having the bolt **24** for its center. A bolt **24***a* passing through the upper end of the brace **23** and one of these openings holds the brace against accidental movement from its adjusted position. The casing **25** is provided with a plurality of spaced openings **27**, and the rod **26** has a plurality of spaced openings **28**, there being a pin **29** which is adapted to be extended through the desired openings **27** and **28** for maintaining the rod **26** immobile in its various adjusted positions in the casing **25**.

At times the timber jack of the present invention can be used for hoisting or handling logs such as the logs **33** instead of being used for felling a tree such as the tree **10**. Thus, as shown in Figure 3 when a log such as the log **33** is to be hoisted, a pulley block **31** may be arranged in engagement with a ring **30** which is secured to the bar **20**, and a chain **32** can be trained over the pulley block **31** and arranged in engagement with the log **33** to be hoisted.

Projecting from the leg **16** is a threaded screw member **34**, and slidably mounted on the screw member **34** is a bracket **35**. The bracket **35** is adapted to be adjusted by means of a nut with handles **36**, and the end of the bracket **35** is adapted to abut against the trunk of the tree **10** as shown in Figure 1.

By rotating the handles **36** the spacing of the standard **14** from the tree **10** can be varied as desired.

Projecting from the bar **20** is a threaded stem **37**, and adjustably mounted on the stem **37** is a sleeve **38**. A coil spring **40** has a portion thereof positioned in the sleeve **38**, and a nut with handles **39** are provided for adjusting the sleeve **38**. A shoe **41** is secured as by welding to the outer end of the coil spring **40**, and the shoe **41** is adapted to engage a portion of the tree **10** being felled. The members **35** and **38** are separate from their respective nuts with handles and these members **35** and **38** are free to move longitudinally on the screw members.

Shoes **42** and **43** are secured to the lower ends of the rod **26** and leg **16**, respectively, in order to impart stability to the jack of the present invention. A chain **44** is trained around the tree trunk, and the chain **44** also extends around a portion of the leg **16**, there being an eye **45** for maintaining the chain **44** in place on the leg **16**. The chain **44** serves to maintain the jack in its proper position against the tree when manual pressure is applied on the handles **39** as when the tree is being felled. A chain **46** extends between the leg **16** and rod **26**, and the chain **46** extends through an eye **47** on the rod **26**, the chain **46** serving to keep the leg **16** and rod **26** in their proper spaced apart relation and to prevent excessive spreading of these members.

From the foregoing it is apparent that a timber jack has been provided which is especially suitable for use in felling or handling trees, logs and the like. In use, the timber jack can be arranged as shown in Figures 1 and 2 while the notches or cuts **11** and **12** are being made in the tree **10**. Then, the spring **40** will exert pressure on the tree **10** above the cuts to thereby cause the tree to be felled and if desired additional pressure can be exerted on the tree through the medium of the jack **41** by rotating the nut with handles **39** in the proper direction. By rotating the nut with handles **36** the bracket **35** can be adjusted to engage the tree trunk whereby the jack can be positioned at the proper distance from the tree. The length of the upright **23** and the standard **14** can be adjusted by removing the pins **29** and **19**, and the chain **44** maintains the jack attached to the tree.

If it is desired to use the device for hoisting a trunk or tree portion **33**, as shown in Figure 3, the pulley block **31** is arranged in engagement with the ring **30** and then the chain **32** is engaged with the log **33** so that the log **33** can be readily lifted or hoisted.

The plurality of openings **22** permit the upright **23** to be adjusted to various positions so that varying amounts of presure can be applied against the tree. A suitable roller bearing **39***a* may be located between the jack sleeve **38** and the nut with handles **39** in order to reduce friction. The chain **44** maintains the jack steady against the tree until it falls, and the jack can be made for any size timber. The spring **40** keeps the tree moving in the right direction as it is being sawed down. The present invention is simple to use and the device will generate sufficient pressure through the medium of the spring **40** to topple over

any size tree as it is being sawed or cut down. Thus, there will be no pinching of saws and personnel will not be endangered. Further, the tree can be felled in any direction desired. Roller bearings can be arranged contiguous to the nuts with handles **39** and **36** to insure smooth operation thereof.

I claim:

A timber jack comprising a vertically disposed standard embodying an upper hollow vertically disposed tube, a leg telescopically mounted in the lower end of said tube, there being a plurality of spaced openings in said tube and leg, a pin extending through selected alined ones of said openings, a horizontally disposed bar pivotally connected to the upper end of said tube, an inclined upright including a casing pivotally connected to said bar, a rod telescopically mounted in the lower portion of said casing, there being a plurality of spaced openings in said casing and rod, a securing element extending through selected alined ones of the openings in said casing and rod arcuate shoes mounted on the lower ends of said leg and rod, a chain extending between the lower ends of said leg and rod, a horizontally disposed screw member secured to said leg, a hollow bracket adjustably connected to said screw member and adapted to bear against the lower portion of a

tree trunk, a nut with handles on said screw member for adjusting said bracket, a threaded stem projecting from said bar and arranged above said screw member, a sleeve adjustably mounted on said stem, a coil spring positioned in said sleeve and extending beyond the end thereof, a shoe secured to the outer end of said coil spring and adapted to abut a tree to be felled, a nut with handles on said threaded stem for adjusting said sleeve, and a chain extending around said leg and around the lower portion of the tree trunk.

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